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Patterns and predictors of multiple sexual partnerships among newly arrived Latino migrant men

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Abstract

Multiple sexual partnerships (MSP), both concurrent and serial short gap, are thought to increase the risk of HIV and sexually transmitted infection (STI) acquisition and transmission. In this study we evaluate potential individual and environmental risk factors for engaging in MSP in a cohort of newly arrived Latino migrant men (LMM) in New Orleans, LA, USA. Participants were surveyed at three time points over a nine-month period to examine factors associated with MSP. Of the 113 men, 32.5% reported ever MSP. In 290 observations, 19.5% of men had concurrent, and 15.0% had serial short gap partnerships in at least one interviews. Substance was associated with MSP, OR (95% CI) 2.00 (1.16, 3.45) whereas belonging to a community organization was found to be protective, OR 0.32 (0.17, 0.59). Interventions to reduce substance use and promote social connection are needed to prevent a potential HIV/STI epidemic in this population.

Keywords

HIV; Latino; longitudinal analysis; migrant; sexual concurrency; STI

INTRODUCTION

Latinos living in the US are disproportionately affected by HIV/STIs(1–3) and the lifetime risk of acquiring HIV/STIs is higher among Latino migrants compared to non-migrant Latinos(4). This excess risk is thought to be due to an increase in high risk behaviors, including drug and alcohol use, multiple sexual partners, and patronage of female sex workers (FSW) (5–11). Studies of Latino migrant men (LMM) report a wide range of FSW patronage ranging from 26% to 69% (12–15). Condom use with sex workers is high, suggesting that sex worker patronage may not be a risk factor for HIV for these men (16,

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17). However, there appears to be a relaxation of condom use with FSWs familiarity with the FSW increases (12). It is, therefore, important to understand the potential for HIV/STI transmission in this group that exhibit high risk behavior but little morbidity.

Partnership factors affect the spread of sexually transmitted infections (STIs) in populations including sexual mixing patterns, structure of sexual networks, rates of partnership formation and dissolution and temporal ordering of sexual partnerships(18). Sexual concurrency, defined as overlapping sexual partners where sex with one partner occurs before and after sex with another partner(19), has been demonstrated using mathematical models and observational studies to play an important role in the transmission of HIV and STIs in a population(20–25).

In addition to concurrency, short gap partnerships, defined as having multiple serial monogamous relationships over the span of one month, have also been shown to increase the risk of transmitting and acquiring STIs(26–28). Short gap partnerships are considered high risk for contracting and transmitting HIV/STIs because the length between partners is shorter than the mean infectious period of bacterial STIs and because the probability of HIV transmission is greatest during the acute phase of the infection, which occurs within one month of infection (29–31). While the importance of sexual concurrency in the spread of the HIV epidemic is still debated (22, 32, 33), the individual risk of multiple partners for HIV/STI acquisition has been well established (34–36).

Several risk factors for engaging in concurrent and short gap relationships have been identified including drug use, alcohol consumption, increased number of lifetime partners, and perception that their partner is also engaging in concurrency(1, 37, 38). Factors specific to concurrency among Latino migrant men have not been well studied, though in a prior study of LMW in New Orleans, we found that binge drinking was associated with having sex with a high risk and low risk partner in the last month(13). In an outbreak of syphilis among LMM in Alabama found that the strongest predictor of syphilis infection was non-injection drug use, particularly crack cocaine, and patronage of FSW (2, 39). Findings from these studies and the concurrency literature suggest that drug and alcohol use, particularly non-injection drug use, appear to be important risk factors for engaging in MSP among LMM (1, 37, 38, 40).

Beyond individual factors, however, are myriad social factors that may influence transmission risk. Social disorganization theory asserts that recent migrants are more likely to engage in risky behaviors post-immigration due to the loss of social support, community attachment, and changes in social norms, rather than imported cultural and behavioral norms(41, 42). A study of female Central American migrants in Houston found that women who had arrived in the US less than five years ago were at an increased risk for concurrency than women who had arrived greater than five years ago(43). We found that the majority of LMM in New Orleans who patronized FSW started doing so in the U.S. and those who lived with family were less likely to have sex with FSW(44).

New Orleans represents a new receiving community for LMM. Prior to hurricane Katrina in 2005, the Latino population in New Orleans was small compared to other metropolitan US

cities(45). The Latino community in New Orleans prior to 2005 was predominantly Honduran due to the job opportunities from the United Fruit and Standard Fruit companies in the mid twentieth century(46). New Orleans' small existing Honduran population combined with the need for laborers in the aftermath of Katrina has led to an increase in LMM, especially Hondurans, in the area since 2005. This population is unique given that it is primarily Honduran and that New Orleans is a relatively new receiving community.

In our prior longitudinal study of newly arrived LMM in the New Orleans area we found no cases of HIV and very low STI morbidity despite high rates of FSW patronage, binge drinking, and non-injection drug use (47). This incongruity was attributed to high rates of condom use with sex workers and low rates of injection drug use. Concurrency is thought to facilitate the transmission of HIV/STI through a population. Since it appears that high levels of condom use are contributing to the resiliency of this population to HIV/STI, understanding the amount of concurrency and short gap partnerships and the risk factors associated with them is important to gauging the potential for disease transmission should condom use be relaxed.

The purpose of this present study is to examine the influence of individual and environmental factors on MSP among LMM and to examine sexual mixing patterns to gain a clearer understanding of the potential for an HIV/STI outbreak in this population. Based on social disorganization theory and the literature(42, 43), we expected to find high levels of concurrency and short gap partnerships in LMM and posited that community involvement and social support would protect against these behaviors.

METHODS

Data for this analysis were collected as part of longitudinal study of LMM in the greater New Orleans area to explore drug and sexual risk factors for HIV(47). Data for the parent study were collected quarterly over 30 months. This exploratory sub-study uses 3 quarterly surveys collected at the 21st, 24th and 27th month of follow up ranging from October 2009-July 2010 when concurrency questions were added.

Recruitment

Respondent driven sampling (RDS) was used to recruit the cohort. Formative research identified four nationalities (Honduran, Mexican, Salvadoran and Dominican) and eight recruitment sites that were common among LMM in New Orleans. Eight initial recruits ("seeds") representing the nationalities identified were consented and given three coupons each to distribute to persons in their social network that met eligibility criteria. Latino men who contacted study personnel within the time allowed, presented a coupon, and met the eligibility criteria were offered admission into the study, consented, and given three coupons to recruit additional persons. Eligible men were 18 years or older, arrived in New Orleans after Hurricane Katrina (August 29, 2005) for the purpose of work, born in Mexico or Latin America, and native Spanish speaking.

Recruitment and follow-up visits were conducted in Spanish. Quarterly interviews were conducted in the field or over the phone. For each completed interview, men received a

$30.00 incentive; for each successful referral enrolled they received a $25 incentive. Incentive options were cellular phone minutes, a store gift certificate, or international calling cards.

Survey Instrument

The instruments were translated and back translated by native Spanish speakers from Honduras and Mexico and then pilot tested on 20 men in an iterative test-revise-test manner to ensure content validity(48, 49). Interviews consisted of questions pertaining to individual (e.g. demographics, alcohol and drug use, sexual behavior and mental health) and environmental factors (e.g. social support, involvement in organizations, living situations and violence/discrimination). Variables were chosen because they had been previously noted in the literature to be associated with risk behavior among Latino immigrant populations.

Definitions of outcomes

Sexual partnership: Partnerships were classified into four mutually exclusive categories: concurrent short gap, serial short gap, monogamy, and abstinence. Men were asked a series of questions regarding up to four non-sex worker partners and four FSW. Specifically, they were asked how many sexual partners they had in the past month, the start date of the sexual relationship, the stop date of the relationship, and if they intended to continue the relationship. These questions have been widely used and demonstrated to be an efficient method to measure the respective sexual partnership types(21, 50–54). Men that reported having sex were then asked personal attributes of each sex partner (i.e. ethnicity, country of origin, etc.) as well as behaviors with the partner (sexual acts, condom use, drug use etc.). Partnerships that overlapped in the past month (i.e. the date of a sex act with any partner fell within the first and last sex act with any other partner) were defined as concurrent. Multiple partnerships in the last month that did not overlap in time were considered short gap serial partnerships. Men that had only had one sexual partner regardless of frequency of sexual contact or type of partner (FSW vs. Non FSW) were defined as monogamous. Those who did not have any vaginal or anal sex in the previous month were classified as abstinent.

Condom use and partner type: Men were asked the frequency of vaginal and anal sex with each partner and the frequency of condom use with both sexual acts. Inconsistent condom use was defined as not using a condom every time the man had anal and/or vaginal sex with his partner. Partnership type was categorized as either: casual partner, main partner or sex worker partner by the study participant. Men were given a list of possible types of partnerships which were generated by the men during piloting of the survey tool. The choices for type of partnership included: wife, long term partner, stable partner, lover, adventure, friend, and friendly sex. For each partner that was defined as a wife, long term partner or stable partner, the partner was labeled a main partner; all other partners were considered casual partners. If the man reported exchanging goods or money for sex with the partner, the partner was defined as a sex worker partner.

Covariates

Two levels of predictors for engaging concurrent relationships were examined longitudinally: individual and environmental. At the individual level variables included: age,

time living in New Orleans, binge drinking (having 5 or more drinks in one sitting)(55), drug use (including; marijuana, hallucinogens, prescribed narcotics, paint sniffing, MDMA, cocaine, crack and heroin), employment, weekly wages, sending money to home country, number of children, patronage of a FSW, English language proficiency, and depression, determined using the CESD-10 (56). Environmental predictors included: employment, having been assaulted, social support, belonging to club/organization (church or sport team), mobility including changing residences or inter/intrastate travel, home composition (living with 5 or more people, living with women, children, or family), living in marginal housing (abandoned houses, trailers, shelters, or on the street) and having a wife or long term partner in his home country. Social support was assessed by a series of 5 questions on a 4 point Likert scale inquiring to the frequency of visiting friends, family, and attending social functions. These covariates were chosen because they either have been found to be associated with MSP in the literature or they fit into the Social Disorganization Theory.

Statistical Analysis

The association of covariates at both the individual and environmental levels on MSP was assessed longitudinally using generalized estimating equations (GEE) with a logit link function and an exchangeable working correlation matrix to account for correlation between subjects over the study period. Subjects reporting sexual intercourse at least once throughout the study period were included in analysis; however, it was possible that some subjects did not complete all three surveys and thus created discordant cluster sizes. The independent effect of time on the primary outcome (MSP) was evaluated and fit into the models as appropriate. Continuous measures at the individual level such as reported income were converted into quartiles and dichotomized at the median to measure associations that did not follow a linear relationship. The 5 social support questions were summed and dichotomized at the mean for either having social support or not having social support. Variables were considered statistically significant at Z-score alpha level of 0.05 using a two-tailed test.

The Cochran-Armitage test for trend was used to determine if partnership type (abstinence, monogamy, short gap, and concurrent partnerships) changed over the course of the study. A P-value of less than 0.05 was the threshold for significance. All analyses were conducted using SAS 9.2.

RESULTS

A total of 290 observations were collected from 113 men over three time points. The mean age of the 113 migrant men included in the study at baseline was 32.2 (10.6). Eighty-three (73.5%) were born in Honduras, 9.7% (n=11) in Mexico, 7.1% (n=8) in Guatemala, 4.4 % (n=5) in El Salvador, and 5.3% (n=6) in Nicaragua. The majority of the men 94.6% (n=106) identified as Mestizo. Mean years of education achieved were 6.1 years (3.7). Fifty-three men (47.3%) reported immigrating to New Orleans from another U.S city before coming from their country of origin. The mean time in New Orleans was 3.42 years (standard deviation 0.96 year) (Table 1).

Of the 113 men in the cohort at baseline, 103 provided information on their past month drug use. At baseline 15.5% reported marijuana use (n=16), 9.7% reported cocaine use (n=10),

5.8% reported crack use (n=6), 3.8% reported using prescribed narcotics (n=3), and 1.9% reported heroin use (n=2) in the past month. There was no significant change in drug use in the study sample over time. Over the entire study period, 10 men reported injection drug use a total of 11 times.

Sexual partnership

The median number of total sexual partners reported over the study period was 1 (range 0–7). Of the 113 men in the cohort, 23 (20.6%) reported being abstinent at all of their interviews. During at least one of the three follow-up visits, 43/113 men (36.3%) reported having had sex with a FSW, 22/113 men (19.5%) reported a sexually concurrent relationship, and 17/113 men (15.0%) reported short gap relationships. Over the three time points MSP was reported 57 times out of 290 observations. Among the 113 men, 37 reported MSP at least once: 25 reported MSP once, 4 reported MSP twice, and 8 men reported MSP at all three interviews. Over the course of study the percentage of men engaging in short gap relationships declined (p-value =0.05), while abstinence, monogamy, and concurrent relationships remained relatively constant (Figure 1). While men who have sex with men (MSM) behavior was only measured at two interviews, only three men reported MSM behavior and of those who did, all denied penetrative anal sex.

In 43 of the 57 reports of MSP (75.4%), at least one partner was a FSW. Thirty-seven of those partnerships (64.9%) had relationships with more than one FSW (Table 4) and in 31 of the 57 reports of MSP (54.4%), all of the participant's partners were FSWs. Of the MSP relationships, 68.4% (39/57) were with at least one non-Latina partner. Non-Latina partners were predominantly White (67.2%) with the next most common race being African American (28.7%), as identified by the participant. Among MSP relationship with one or more non-Latina partner, 94.9% (37/39) reported that at least one of their partners was a FSW. Among all reported FSW partners, 80.9% were non-Latina. Among the FSWs, 61.3% were identified as White and 35.5% as African American. Conversely, 84.8% of women identified as main partners were Latina.

Condom use

The frequency of consistent condom use was high in our study population. Consistent condom use was reported in 79.1% of all sexual relationships. When stratified by partner type 68.6% of concurrent relationships (24/35), 86.4% of short gap relationships (19/22) and 51.6% of monogamous relationships (63/122) reported consistent condom use. Of all sexual encounters with FSW, 90.9% (60/66) used condoms consistently. Among MSP observations with a non-Latina partner 87.0% (20/23) consistently used condoms (Table 4).

Multiple short gap sexual partnerships

There were several predictors at the individual level that were associated with having MSP over the 9 months of follow-up. Individual level risk factors that were associated with an increase in risk of MSP were any drug use with an OR of 2.66 (1.14, 3.21), drug use excluding marijuana with an OR of 2.63 (1.07, 6.47), and binge drinking with an OR of 2.02 (1.22, 3.35) (Table 2).

Men engaging in MSP reported variable condom use depending on partner types. Consistent condom use by partnering patterns were: casual partners and main partners (20%), two casual partners (53.9%), and two main partners (50%). This population has very high reported consistent condom use with non-Latina partners. In instances when the men reported two non-Latina partners, their consistent condom use was 100% (Table 4).

The only environmental factor that was associated with MSP was belonging to a club or organization. Twenty-six men reported belonging to a club or organization at baseline and 25 of those men reported the type of organization. Two men were in Alcoholics Anonymous (8.0%), 3 reported membership in a worker's rights group (12%), 1 reported belonging to a sports team (4%), and 19 reported belonging to a religious or church group (76%). Membership in a club or organization was strongly protective against engaging in MSP OR 0.32 (0.17, 0.59). All other potential risk factors were not associated with MSP (Table 3).

Monogamy

Of the 290 observations, 122 (42.1%) reported only one sex partner in the previous month. Of these men, 23 (18.9%) reported a FSW partner, 45 (37.2%) reported a casual partner, and 55 (45.5%) reported a main partner. The median length of relationship with casual partners was 32 weeks (Inter-quartile range 92 weeks) whereas the median length of relationship with main partners was 2.5 years (Inter-quartile range 3 years). Among monogamous men reporting a FSW partner, 10 (43.5%) said that they planned on having sex with that particular FSW again.

DISCUSSION

We sought to examine environmental influences on HIV/STI transmission behavior using Social Disorganization Theory as a guide. This theory asserts that migration exposes people to new environments with different rules and patterns of behavior than their home country and that migrants lose previous community attachment, social bonds, and social control that had shaped their behavior and formed a social cohesion in their country of origin(41, 42). This theory posits that the high risk behavior demonstrated by newly arrived migrants is not due to imported behaviors by the migrants but rather due to the lack of community attachment and social bonds in the receiving community(42). Indeed, in our prior work, we found that Latino migrant men (LMM) were more likely to engage in sexual relationships with FSW in the United States compared to their behaviors in their home country(44). In this present study, we found that belonging to a social club or organization was protective for MSP, supporting the notion of social disorganization as a driving force in HIV/STI risk among LMM. In addition to the protective effects of belonging to a social organization, the use of condoms with perceived high risk partners is also protecting this population from HIV and STI infection despite the high prevalence of MSP.

Our study population is unique in that it is predominantly composed of Honduran immigrants. The 2009 estimated prevalence of HIV in Honduras is 0.8%, higher than the HIV prevalence in the US and Mexico but similar to the HIV prevalence in other Central American countries including: Guatemala, El Salvador, and Panama(57). Despite the higher prevalence of HIV in their home country, our study population is not affected by HIV. Some

of this may be explained by the healthy migrant effect, since healthy men are more likely to migrate to the US for work than those who are sick(58). It is also possible that men who knew they were HIV-infected did not accept to be in the study. Low rates of STIs could be explained by the use of non-prescription antibiotics to self-treat. MSP have been demonstrated to be an important risk factor in the transmission and acquisition of HIV/STIs(59, 60). While studies have examined the prevalence of sexual concurrency in undocumented Central American migrant women(43) and Latino adolescents(61), far fewer studies have examined MSP among LMM. A nationally representative survey done in 2002, found that approximately 8.8% of U.S. Latino men reported concurrency in the past year. Concurrency in our study sample was over 2 times higher than that average and short gap serial relationships are nearly 4 times as high. Our findings suggest that newly arrived LMM are at an increased risk of transmitting and acquiring HIV/STIs compared to more established Latino populations.

Fewer studies have examined short gap serial partnerships compared to concurrency. Studies of short gap serial partnerships have found this behavior to be a risk factor for STI acquisition (35, 36). In our study, short gap partnerships appear to decrease over the 9 month follow-up period ($p=0.05$). It is possible that over the 9 months, the social support networks grew for some men and that more Latinas migrated to New Orleans, resulting in the decrease in MSP, particularly with FSW. The follow-up time and frequency of interviews is too short to properly assess this theory. More studies should examine serial short gap partnering over longer periods of time.

The only two individual level risk factors that were significantly associated with an increase in the odds of multiple past month partnerships were drug use, both with and without including marijuana in the drug use category, and binge drinking. These results correspond to other studies that have similarly found drugs and alcohol to be important risk factors for engaging in concurrent and short gap partnerships(1, 37, 38). Injection drug use (IDU) did not appear to be a driving factor in the risk of MSP, largely because it was uncommon among the population. IDU was reported a total of 11 times from 10 men, which suggests that IDU use was sporadic since only one participant reported injecting drugs at more than one interview. In this population marijuana and cocaine were the most commonly reported drugs. Our findings corroborate the findings of Paz-Baily et al. who found that non-injection drug use is more prevalent and more likely to be a risk factor for HIV/STI risk behavior than IDU (2, 39).

The results from Table 4 on consistent condom use and partnership types may help explain the resilience of the LMM against HIV/STI infection despite the high prevalence of MSP. Men reporting only FSW partners also reported very high rates of consistent condom use with these FSW (97.3%). While HIV and STI was not measured during this time period, our baseline assessment demonstrated a very low rate of Chlamydia, gonorrhea, syphilis and HIV(47), corroborating their self-reported condom use.

We hypothesize that men do not use condoms as frequently with casual and main partners because of a low perceived HIV/STI risk with these partners. They use condoms less consistently when they report a Latina partner. There may be some perceived safety from

HIV/STIs when the partner is of the same ethnicity as the man. This is demonstrated in Table 4 where condom use is highest when the participant had multiple non-Latina partners. It is possible that they used condoms more frequently with FSW because they perceived them to be a higher risk partner or because the FSW demanded it. It is difficult to determine if the increase in condom use is due to the fact that the partner was non-Latina or that she was a FSW since FSWs were more likely to be non-Latina and main partners were more likely to be Latina. Differential condom use may be influenced by a combination of partner race and partnership type. Given the high rates of MSP, if condom use should relax, this group would be at high risk for HIV/STI spread.

There are some limitations to this study. Our estimates of concurrency only account for concurrency that occurred in the month prior to the interview. Most other studies of concurrency look at concurrency that occurred in the past 6 months to one year. We chose this time frame because concurrency is often underreported(62) over longer periods of time. Measuring MSP for just the last month may have underestimated the true rate in this population, however, we do not think this happened because we found a high rate of MSP in this group. Another limitation is power. This is a pilot study with a relatively small sample size, therefore we did not have sufficient power to assess and control for many potential confounders in the GEE models. Despite this limitation, we found considerable effect measures, suggesting that the associations were real and not design artifact.

Generalizability may also be limited. Our study population was collected using RDS(47) in New Orleans and therefore may not be generalizable to other cities. And even in New Orleans, selection bias may have occurred as a result of the chain referral process of RDS. The validity of our estimates may be limited if the assumptions of RDS are not completely met (63–66). We were not able to use the RDS Analytic Tool (RDSAT) to apply population weights because this is longitudinal data. Finally, self-reported behavior is subjected to social desirability bias. We tried to minimize social desirability bias by intensive cultural and linguistic training of our bi-lingual interviewers who conducted the interviews in private settings.

Despite these limitations, this is the first study to examine the prevalence of both concurrency and short gap relationships in a population of newly arrived LMM. The combination of past month concurrent and short gap partnerships provides a more complete picture of the potential for transmission of HIV/STIs in this population. We are aware of only a few other studies, focusing primarily on gonorrhea that combined both categories of risky partnerships(35, 36). We also measured condom use with each partner to determine its role in the resiliency of this population. Additionally, this is the first study to specifically measure individual and environmental factors of MSP in this population.

Our findings indicate that MSP is common among this group of LMM and that condom use in these multiple partnerships varies with partnership type. MSP was more frequent in men who engage in substance use and less common in men who are members of a club or organization. It also appears that protective behaviors including condom use with FSWs and perceived high risk partners, such as non-Latinas, may have prevented the spread of HIV and STIs into this population despite the high prevalence of MSP. Interventions aimed at

decreasing substance use, increasing social connectedness and maintenance of condom use will likely be important in preventing HIV/STIs from entering and spreading throughout the LMM population.

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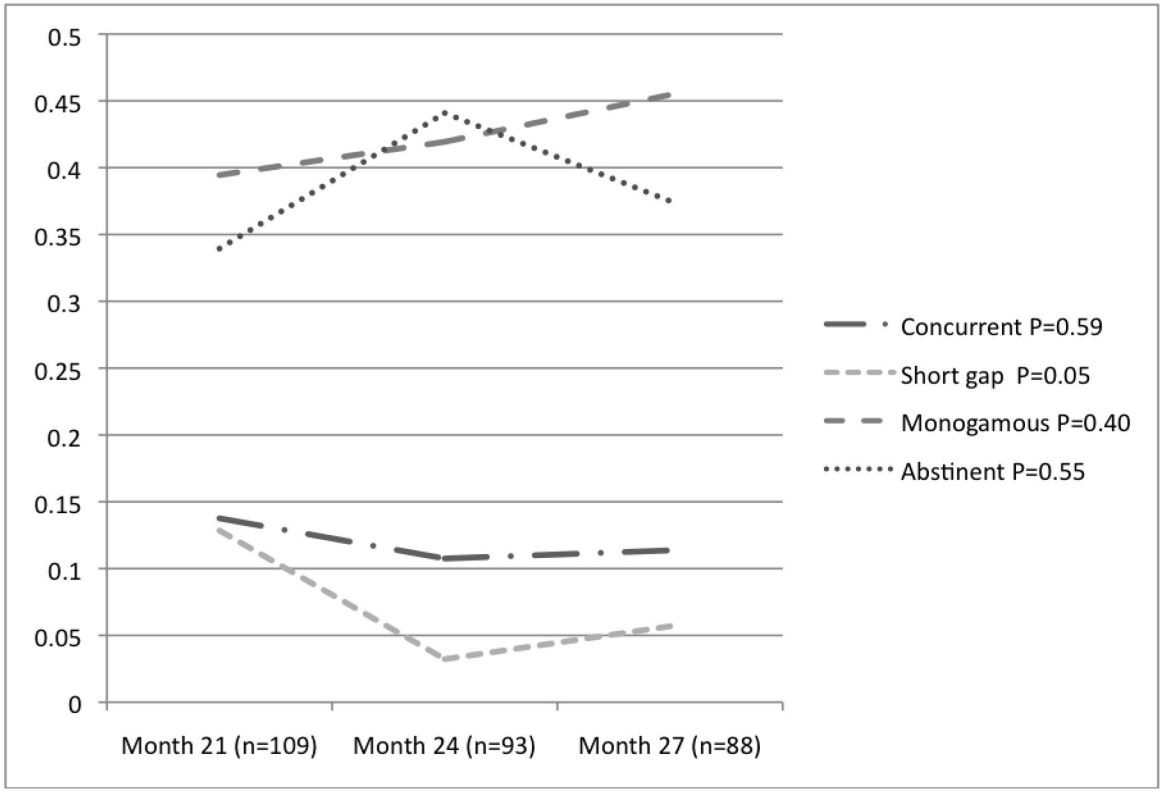

Figure 1.
Trends in Frequency of Partnerships Over Three Follow-up Interviews (n=290)

Table I

Characteristics of study population at beginning of study follow-up (N=113)

Age mean (s.d)	32.24 (10.56)
Education *(n=104)*	
Mean (s.d) years achieved	6.11 (3.65)
Race (n=112)	
Indigenous	2 (1.79)
Mestizo	106 (94.64)
White	2 (1.79)
Don't know	2 (1.79)
Living arrangements (n=111)	
Living with family	58 (52.3)
Living with Wife	70 (63.1)
Nationality	
Honduran	83 (73.5)
Mexican	11(9.7)
Guatemala	8 (7.1)
Nicaragua	6 (5.3)
El Salvador	5 (4.4)
Employment	
Construction	61 (54.0)
Restaurant	7 (6.2)
Cleaning	16 (14.2)
Other	11 (9.7)
Marital status*(n=107)*	
Married/long-term partner	45 (42.0)
Single	60 (56.1)
Divorced/separated	2 (1.9)
Immigration status	
Median years (range) residing in New Orleans	3.17 (.67–5.08)
Median years (range) living in U.S. (n=105)	2.83 (1.17–21.92)
Migrated from (n=112)	
Home country	59 (52.7)
Other area in the U.S.	53 (47.3)
English proficiency	
Understands very well	9 (8.0)
Speaks very well	9 (8.0)

Table II

Individual Factors by partnering status (113 men, 290 observations)

	MSP n=57	Other n=233	OR (95% CI)
	Mean (sd)	***Mean (sd)***	
Age in *years-Continuous*	32.02 (8.33)	32.60 (11.60)	1.00 (0.97, 1.03)
Time in New Orleans-months	40.07 (12.44)	41.00 (11.26)	0.97 (0.94, 1.01)
Number of children	2.39 (2.29)	n=232 2.00 (1.87)	1.09 (0.89, 1.33)
	n (%)	**n (%)**	
Any drug use in previous month	n=51 20 (39.2)	n=214 33 (15.4)	2.66 (1.14, 3.21)*
Drug use in previous month (excluding Marijuana)	n=51 15 (29.4)	n=213 17 (8.0)	2.63 (1.07, 6.47)*
Binge drinker	42 (73.7)	110 (47.2)	2.02 (1.22, 3.35)**
Income > median ($400/week)	32 (56.1)	123 (52.8)	1.08 (0.66, 1.76)
Sent money to home country	35 (61.4)	139 (59.7)	0.81 (0.51, 1.28)
Does not understand or speak English well	55 (96.5)	220 (94.4)	1.40 (0.38, 5.24)
Depressed	18 (31.6)	65 (27.9)	1.11 (0.56, 2.23)

* $P<0.05$

** $P<0.01$

Table III

Environmental Factors by Partnering Status (113 men, 290 observations)

	MSP n=57	Other n=233	OR (95% CI)
	n (%)	n (%)	
Employed	45 (79.0)	n=239 185 (80.8)	0.86 (0.50, 1.48)
Social Support/experiences			
Belongs to club/organization	9 (15.8)	98 (42.1)	0.32 (0.17, 0.59)*
Has social support	31 (54.4)	118 (50.6)	0.93 (0.55, 1.56)
Wife or long term partner in home country	24 (42.1)	86 (36.9)	1.30 (0.72, 2.35)
Assaulted in past month	n=51 4 (7.8)	n=219 11 (5.0)	1.09 (0.34, 3.51)
Mobility			
Change residence	12 (21.1)	n=232 46 (19.8)	1.25 (0.72, 2.20)
Intra/Interstate Travel	18 (31.6)	58 (24.9)	1.17 (0.65, 2.11)
Home composition			
Woman in Home	n=56 39 (69.6)	n=232 142 (61.2)	1.31 (0.77, 2.28)
5 or more people in house	38 (66.7)	117 (50.2)	1.45 (0.77, 2.75)
Lives in marginal housing	14 (24.6)	90 (38.6)	0.66 (0.34, 1.28)
Family in house	n=56 25 (44.6)	n=232 97 (41.8)	1.33 (0.80, 2.22)
Child in house	n=56 17 (30.4)	n=232 70 (30.2)	0.92 (0.44, 1.96)

*$P<0.001$

Table IV

Partner Level Mixing Among All Multiple Sexual Partnerships (n=57 observations)

	n (%)	Consistent condom use n(%)
Type of Partner		
FSW and FSW	37 (64.9)	36 (97.3)
FSW and casual partner	10 (17.5)	8 (80.0)
Casual and main partner	5 (8.8)	1 (20.0)
Casual and casual partner	13 (22.8)	7 (53.9)
Main and main partner	2 (3.5)	1 (50.0)
Ethnicity of partners		
Latina and Latina	18 (31.6)	9 (50.0)
Latina and non-Latina	15 (26.3)	10 (66.7)
Non-Latina and Non-Latina	24 (42.1)	24 (100.0)

There were no cases of FSW and main partner reported